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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,536	08/31/2001	Lee C. Moore	D/A0A45	3291

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EXAMINER
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KOYAMA, KUMIKO C

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/944,536	<b>Applicant(s)</b> MOORE, LEE C.	
	<b>Examiner</b> Kumiko C. Koyama	<b>Art Unit</b> 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

Acknowledgement is made of receipt of Amendment filed on July 28, 2003.

### ***Claim Objection***

1. Claims 2, 3, 22 and 23 are objected to the following informailities:

Re claims 2, 3, 22 and 23: The examiner respectfully requests the Applicant to clarify whether the Applicant meant to disclose --comprises-- instead of "compromises" as written in these claims. Please make appropriate corrections, if the Applicant's intension is to utilize --comprises--.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 8, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Okamoto et al (US 4,813,010).

Okamoto discloses that a general document is divided into a plurality of blocks, and headings are assigned to the respective blocks. Each block is further divided into subblocks and subheadings are assigned to the respective subblocks (col 1, lines 12-20). Okamoto teaches a document processing using heading rules storage for generating documents with hierarchical

logical architectures that when a document data is input at input device, the input document data is sequentially stored in a document storage. The input document data is segmented into a plurality of blocks by document processor. In segmentation processing, a line return code and a space code or segmentation symbol such as "...", ",", ":", or "." are determined as segmentation codes. In this case, the segmentation sentence length is measured by counting characters. (col 5, lines 14-29). Such disclosure teaches the delimiter definition limitation of the claim. Okamoto further discloses that if the measure value falls within a predetermined value the sentence is determined as having the possibility of being a heading sentence, which is interpreted as searching the document to find the occurrences of items corresponding to the defined sub-section delimiter. When the segmented sentence is determined as having the possible of being a heading sentences according to the measure number of characters, or delimiter, the processor further determines whether the segmented sentence is a heading candidate, and then a heading word (col 5, lines 30-40, col 6, lines 27-45). After the segmented sentence is determined as a heading word, the heading goes through a decision to be assigned with a logical hierarchy, such as C1 in this case (col 6, lines 47-60). The logical architecture containing the chapter heading is stored in logical architecture storage (col 6, lines 55-60). Such disclosure reads on the claimed limitation of creating the index for the document from the found items corresponding to the sub-section delimiter occurrences. Okamoto also discloses that it is known in the art that document data is processed in units of pages of the printing sheets (col 1, lines 24-25).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 5, 7, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Shiiyama (US 5,905,811). The teachings of Okamoto have been discussed above.

Okamoto teaches that the document processor is connected to input device including a keyboard to perform centralized handling and processing of input documents. The Document pocessor is also connected to original document storage for storing input original documents and to display controller for causing display to display the input original document read out from the storage (col 2, lines 20-35).

Okamoto fails to teach scanning a printed version of the document to generate scan data, performing one of optical character recognition functions and document recognition functions on the scan data to generate an electronic version of the document. Okamoto also fails to teach selecting an exemplary sub-section title, performing one of document recognition and optical character recognition on the selected exemplary sub-section title, and using at least one recognized property of the exemplary sub-section title as a subsection delimiter definition.

Shiiyama discloses an image scanner 1 is image input means for optically reading out an original image of a document and an image data (col 2 lines 3-5, lines 44-46). Shiiyama also

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discloses an OCR function in order convert the inputted image information to a text (col 1 lines 7-9). Shiiyama teaches searching the data for one of characters (col 2 lines 60-64).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Shiiyama to the teachings of Okamoto in order to create an electronic version of the document so that the user can easily locate the searching topic and also make the search faster by inputting the electronic version into a computer and having the computer do the search.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Kujiraoka (US 5,845,305). The teachings of Okamoto have been discussed above.

Okamoto fails to teach displaying the created index, checking that the displayed index is correct and correcting the index.

Kujiraoka teaches to inspect whether or no the index word is appropriate (col 3 line 9-10) and display control means comprising editing means for editing the reading of the index word.

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Kujiraoka to the teachings of Okamoto in order to confirm that the inputted index is correct and avoid any mistakes to the indexing system, which will lead to a quicker and faster searching system.

7. Claims 9-13, 18-20 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Shiiyama.

Okamoto discloses that a general document is divided into a plurality of blocks, and headings are assigned to the respective blocks. Each block is further divided into subblocks and subheadings are assigned to the respective subblocks (col 1, lines 12-20). Okamoto teaches a

document processing using heading rules storage for generating documents with hierarchical logical architectures that when a document data is input at input device, the input document data is sequentially stored in a document storage. The input document data is segmented into a plurality of blocks by document processor. In segmentation processing, a line return code and a space code or segmentation symbol such as "...", ";", ",", or ":" are determined as segmentation codes. In this case, the segmentation sentence length is measured by counting characters. (col 5, lines 14-29). Such disclosure teaches the delimiter definition limitation of the claim. Okamoto further discloses that if the measure value falls within a predetermined value the sentence is determined as having the possibility of being a heading sentence, which is interpreted as searching the document to find the occurrences of items corresponding to the defined sub-section delimiter. When the segmented sentence is determined as having the possible of being a heading sentences according to the measure number of characters, or delimiter, the processor further determines whether the segmented sentence is a heading candidate, and then a heading word (col 5, lines 30-40, col 6, lines 27-45). After the segmented sentence is determined as a heading word, the heading goes through a decision to be assigned with a logical hierarchy, such as C1 in this case (col 6, lines 47-60). The logical architecture containing the chapter heading is stored in logical architecture storage (col 6, lines 55-60). Such disclosure reads on the claimed limitation of creating the index for the document from the found items corresponding to the sub-section delimiter occurrences. Okamoto also discloses that it is know in the art that document data is processed in units of pages of the printing sheets (col 1, lines 24-25). Okamoto teaches that the document processor is connected to input device including a keyboard to perform centralized handling and processing of input documents. The Document pocessor is also connected to

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original document storage for storing input original documents and to display controller for causing display to display the input original document read out from the storage (col 2, lines 20-35).

Okamoto fails to teach scanning the document to generate scanned document data and performing recognition functions on the scanned document data to generate a recognized version of the document.

Shiiyama discloses an image scanner 1 is image input means for optically reading out an original image of a document and an image data (col 2 lines 3-5, lines 44-46). Shiiyama also discloses an OCR function in order convert the inputted image information to a text (col 1 lines 7-9). Shiiyama teaches searching the data for one of characters (col 2 lines 60-64).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Shiiyama to the teachings of Okamoto in order to create an electronic version of the document so that the user can easily locate the searching topic and also make the search faster by inputting the electronic version into a computer and having the computer do the search.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto as modified by Shiiyama as applied to claim 9 above, and further in view of Knowles (US 6,345,764). The teachings of Okamoto as modified by Shiiyama have been discussed above.

Okamoto as modified by Shiiyama fails to teach that the delimiter searcher is operative to search for a defined delimiter comprising a symbol selected from a barcode and a data glyph.

Knowles teaches a document containing barcodes (Fig. 1A).



Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Knowles to the teachings of Okamoto as modified by Shiiyama because a reader may be trying to retrieve or searching for a collection of barcode or information contained in a barcode, which simplifies the users search because barcodes can be scanned instantaneously and directly leads to the precise information source.

9. Claim 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto as modified by Shiiyama as applied to claim 9 above, and further in view of Schmidt et al (US 4,903,229). The teachings of Okamoto as modified by Shiiyama have been discussed above.

Okamoto as modified by Shiiyama fail to teach that the print engine comprises a xerographic printer.

Schmidt teaches a forms generating and information retrieval system utilizing a xerographic print engine 24 (col 2 line 34).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to modify the teachings of Schmidt to the teachings of Okamoto as modified by Shiiyama because the xerographic print engine generates forms and inures the benefits of graphic reproduction.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto as modified by Shiiyama and Schmidt as applied to claim 15 above, and further in view of Herregods et al (US 6,064,397). The teachings of Okamoto as modified by Shiiyama and Schmidt have been discussed above.

Okamoto as modified by Shiiyama and Schmidt fail to teach that the print engine comprises an inkjet printer.

Herregods teaches that a printer can be a inkjet printer (col 1 line 42).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to modify the teachings of Herregods to the teachings of Okamoto as modified by Shiiyama and Schmidt because an inkjet printer can provide a reproduction of colored document, therefore it can provide a more precise reproduction of the document when the document includes colored features.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Alam et al (US 6,336,124). The teachings of Okamoto have been discussed above.

Okamoto fails to teach that the automatically generated index is an automatic generated table of contents of the document, and the items corresponding to the defined sub-section delimiter are chapter titles displayed in an order in which they appear in the document.

Alam teaches that heading of input document may be located to generate a linked table of contents page containing the headings, each table of contents heading containing a link to the heading contained in the output document (col 2, lines 37-45). Alam also discloses that the table contents is displayed in the display page (col 19, lines 17-25).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Alam to the teachings of Okamoto in order to easily show the hierarchy of the documents as well as facilitating the selection and view of a particular page of the document, which provides faster access to the particular part of interest in the document.

***Response to Arguments***

12. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

The examiner has found new art that she believes is more relevant to the Applicant's claimed invention and new rejections have been applied. See 35 USC 102 and 103 above.

***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwai et al., U.S. Patent No. 4,876,665, discloses document processing system deciding apparatus provided with selection functions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kumiko C. Koyama whose telephone number is 703-305-5425.

The examiner can normally be reached on Monday-Friday 7am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

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*Kumiko C. Koyama*

Kumiko C. Koyama  
November 14, 2003

*Diane I. Lee*

**DIANE I. LEE**  
**PRIMARY EXAMINER**